REMARKS

Claims 1, 11, and 18 are amended. Claims 1-3, 5, and 7-22 are pending.

The independent claims 1, 11, and 18 are amended to clarify that the electric wire of the present invention includes a conducting metal having a cylindrical wire shape and able to continually conduct a current longitudinally along the length of the cylindrical wire shape. Such amendments are supported in the application as originally filed, for example, in reciting "wires" and "cables" throughout the application, such as in paragraphs [0008] to [0010], [0013] to [0017], and [0023] to [0024] of the corresponding published application.

In addition, such wires and cables of the present invention are described as having a "diameter", such as in paragraphs [0015] and [0019] of the corresponding published application, referring to the circular cross-section of the cylindrical wire shape. Furthermore, the wires of the present invention are described as being capable of being used in "windings" of "transformers" such as described in paragraphs [0024] and [0025] of the corresponding published application.

One having ordinary skill in the art would recognize that such "wires and "cables" described in the present application have a cylindrical wire shape and conduct current longitudinally along the length of the cylindrical wire shape, and are capable of being wound in transformers. Accordingly, no new matter has been added by the present amendments to the claims.

In the office action, claims 1-3, 5, and 7-10 were rejected under 35 U.S.C. § 112, second paragraph. Claim 1 is amended to overcome the rejection, so reconsideration and withdrawal of the rejection of the claims 35 U.S.C. § 112, second paragraph are respectfully requested.

In the office action, claims 1-3, 5, 7-19, and 22 were finally rejected under 35 U.S.C. § 103(a) in view of U.S. Patent Number 5,527,997 to Saen, U.S. Patent Number 2,744,063 to Shockley, and U.S. Patent Number 2,950,149 to Thomson; claim 20 was finally rejected under 35 U.S.C. § 103(a) in view of Saen, Shockley, Thomson, and U.S. Patent Number 5,667,849 to Carey, II et al.; and claim 21 was finally rejected under 35 U.S.C. § 103(a) in view of Saen, Shockley, Thomson, and U.S. Patent Number 3,027,269 to Teshima et al.

Independent claims 1, 11, and 18 are amended to recite and clarify that the present invention involves forming a wire by coating with an alloy a conducting metal having a cylindrical wire shape and able to continually conduct a current longitudinally along the length of the cylindrical wire shape.

None of the cited art discloses or suggests every element, step, and feature of the present invention as recited in amended independent claims 1, 11, and 18, including an electric wire which is coated and which includes a conducting metal having a cylindrical wire shape and able to continually conduct a current longitudinally along the length of the cylindrical wire shape.

Saen describes a "flat cable" in the abstract; "a conductor for use in a thin flat cable" in the Field of the Invention in column 1, lines 12-13; and plating of "a copper foil" in column 2, lines 60-61.

In fact, Saen teaches away from the cylindrical wires of the present invention, since Saen describes formation of "a flat conductor ... in which a round copper wire with a tin plating or a tin alloy plating is rolled down flat by a roller" in column 2, lines 62-66 and throughout the description of Saen.

Shockley describes that "a bearing metal layer, for example, can be plated on to a backing metal and the thickness of the metal plate ...", in column 1, lines 26-28.

Thomson describes a shaft member of a machine in FIG. 1 and column 1, lines 55-62, as opposed to a conducting cylindrical wire as in the present invention, with the shaft member in Thomson being coated with an alloy for "improved durability and is especially adapted for use under moist or humid conditions", in column 1, lines 55-57.

In fact, Thomson teaches away from the present invention, since the coating of Thomson is for durability and to combat the effects of moisture and humidity, as opposed to the present invention which provides the alloy coating for improved performance for electrical signal transmission.

Carey II describes a "metal strip" in the abstract; in column 7, lines 10-15; and throughout the description of Carey II.

Teshima describes applying an alloy coating to a "steel strip" in column 1, lines 62-62; column 2, lines 40-41; and throughout Teshima, as well as the coating of a "steel sheet" in column 2, lines 45-49.

One having ordinary skill in the art would not look to the flat cables, flat conductors, foils, metal plates, shaft members, metal strips, and steel strips and sheets as variously recited by Saen, Shockley, Thomson, Carey, II, and Teshima, for the electric wire of the present invention having a conducting metal having a cylindrical wire shape and able to continually conduct a current longitudinally along the length of the cylindrical wire shape, which is then coated by the predetermined alloy.

First, one having ordinary skill in the art would recognize that such flat cables, flat conductors, foils, metal plates, metal strips, and steel strips and sheets of Saen, Shockley, Carey, II, and Teshima would conduct electrical signals including small and variable electric signals, such as audio signals, in a significantly different manner over the length and width of such flat cables, flat conductors, foils, metal plates, metal strips, and steel strips and sheets, compared to conduction of electrical signals as well as small and variable electric signals, such as audio signals, by the cylindrical wire shaped conducting metal in the present invention.

Second, one having ordinary skill in the art would recognize that such flat cables, flat conductors, foils, metal plates, metal strips, and steel strips and sheets of Saen, Shockley, Carey, II, and Teshima would conduct electrical signals in any direction along the effectively two-dimensional configuration of these components, as opposed to the longitudinally conducting of electrical signals along the effectively one-dimensional length of a cylindrical wire shape of the conducting metal as in the present invention.

Third, one having ordinary skill in the art would recognize that such flat cables, flat conductors, foils, metal plates, metal strips, and steel strips and sheets of Saen, Shockley, Carey, II, and Teshima are not structurally equivalent to cylindrical conductors, since each of the flat cables, flat conductors, foils, metal plates, metal strips, and steel strips and sheets of Saen, Shockley, Carey, II, and Teshima has a length, width, and height which may all be different.

On the contrary, the cylindrical wire shape of the electrical conductor of the present invention has a diameter, which may be a uniform diameter, along the longitudinal length of the conductor having the cylindrical wire shape as in the present invention. One having ordinary skill in the art would recognize that the term "diameter" in the present application is used for electrical wires having cylindrical wire shapes with circular cross-sections, while such flat cables,

flat conductors, foils, metal plates, metal strips, and steel strips and sheets of Saen, Shockley, Carey, II, and Teshima would not have "diameters" since such components are not cylindrical wire shapes having circular cross-sections as in the present invention.

Finally, such flat cables, flat conductors, foils, metal plates, metal strips, and steel strips and sheets of Saen, Shockley, Carey, II, and Teshima cannot be readily wound about other structures such as in power transformers, as is possible for the present invention.

One having ordinary skill in the art would recognize that an attempted winding of such flat cables, flat conductors, foils, metal plates, metal strips, and steel strips and sheets of Saen, Shockley, Carey, II, and Teshima about another structure, such as the core in a power transformer, would significantly change the known electrical and inductive characteristics of the power transformer. On the contrary, the present invention is directed to a conductive electrical wire capable of being wound about another structure, such as the core in a power transformer, in a manner well known in the art for wires and transformers, which would provide the known electrical and inductive characteristics of power transformers.

In further regards to Thomson, one having ordinary skill in the art would not look to Thomson for the present invention, since Thomson does not utilize the shaft member as a conducting wire, and since Thomson only applies an alloy coating to protect the shaft member from outside elements as opposed to facilitating electrical signal transmission through the shaft member, as with the conducting member of the present invention.

In fact, Thomson teaches away from the present invention, since the shaft member of Thomson is fabricated for use in a machine with movable and lubricated parts, such as shown in FIG. 1 of Thomson, such as a lathe or other reciprocating mechanical devices. Accordingly, one having ordinary skill in the art would not use the shaft member of Thomson in the same or

comparable manner as in the use of the present invention as an electrical wire, since the passing of current through such a shaft member of Thomson may be hazardous to operators of the machine. Although the shaft member in Thomson is metallic in composition, there is no disclosure or suggestion in Thomson that the shaft member is intended to be used as a wire to conduct electricity, as in the present invention, and in fact the disclosed intention of Thomson is instead to use the shaft member as a mechanical component of a machine with the shaft having improved durability and resistance to moisture and humidity.

Accordingly, claims 1-3, 5, and 7-22 are patentable over the cited art, so reconsideration and withdrawal of the final rejection of claims 1-3, 5, and 7-22 are respectfully requested.

Entry and approval of the present amendment and allowance of all pending claims are respectfully requested.

In case of any deficiencies in fees by the filing of the present amendment, the Commissioner is hereby authorized to charge such deficiencies in fees to Deposit Account Number 01-0035.

Respectfully submitted,

Date: October 31, 2007

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